

## Norwich and Pandemic Influenza Planning

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### *Fitting into the Larger Pandemic Planning Context*

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## **EXECUTIVE SUMMARY**

Planning for a potential pandemic influenza event is a process being undertaken at all levels of government in states and international agencies throughout the world. Current concern about a potential pandemic stems from the “existence of an influenza virus of pandemic potential,” namely a strand of Avian Influenza known as the H5N1 virus.<sup>1</sup> Although the H5N1 virus has yet to spread rapidly from person-to-person, which would likely cause a pandemic, health experts believe that H5N1 could evolve and develop this ability. Furthermore, health experts warn that the emergence of a new strain of influenza to which the human population has little natural immunity could occur at any point. For these reasons, the World Health Organization (WHO) released a report entitled “WHO: Global Influenza Preparedness Plan” which recommends that every state around the globe implement pandemic influenza preparedness plans. Additionally, the WHO report contains detailed recommendations as to how and in what sectors such planning should occur. Countries around the world have followed the advice of the WHO and are currently formulating or have already instituted pandemic influenza plans. The United States has heeded the WHO recommendations with vigor as federal agencies, state governments, local governments, and many private sector entities have all developed pandemic influenza plans.

When developing its own influenza preparedness plan, the town of Norwich should implement mechanisms put in place by previous plans made by the Vermont state government. Specifically, Norwich should use the Vermont Department of Health (VDH) plan entitled “Pandemic Influenza Preparedness and Response Plan,” which takes the guidelines presented in the WHO influenza report and alters them so they fit Vermont.

Norwich pandemic influenza preparation should fall into three main areas: 1) communication, 2) combative measures to be used during a pandemic, and 3) coordination with the private sector. First, Norwich must implement a communications strategy that focuses on delivering one clear message about pandemic conditions to Norwich residents during a pandemic. Norwich town officials should coordinate with the VDH and other state agencies to plan a system through which state updates and additional information could be easily passed to Norwich officials, who could then disseminate this information at the local level using various communication media. Additionally, Norwich must make preliminary plans to prepare the town to operate temporary clinics, quarantines, isolation facilities, and similar combative services if local health care facilities are overrun as a result of the pandemic. Such planning should cover basic logistics, such as where a clinic could be held and finding potential staffers. Lastly, Norwich should bring local businesses into the planning process both to help the town in its own response and to help individual businesses formulate pandemic influenza response plans of their own. Overall, any and all planning for a potential pandemic influenza event should aim to limit the population affected by the virus, reduce mortality, reduce the spread of the virus, and reduce the economic and social disruption caused by the pandemic within Norwich.

## **1. PANDEMIC INFLUENZA: THE BROADER CONTEXT**

### *1.1 History and Current State of Pandemic Influenza Events*

A pandemic influenza event occurs when a new strand of influenza emerges and begins to spread rapidly from person-to-person on a world wide basis. Pandemic influenza causes serious illness on a large scale because there is little immunity to the new strain of virus among the human population. During the twentieth century, the world experienced three pandemic influenza events. In 1918, the worst pandemic influenza of the twentieth century killed up to fifty million people world wide and approximately 675,000 people within the United States. In 1957, the second pandemic influenza of the twentieth century killed over 1,000,000 people worldwide including over 70,000 people within the United States.<sup>2</sup> The most recent pandemic influenza, which occurred in 1968, killed around 700,000 people world wide, with 34,000 casualties within the United States.<sup>3</sup> Pandemic influenza events are especially challenging for governing institutions to combat because a substantial part of a state's population can become infected during a rather short period of time. As a result, health care systems can quickly be overrun, and shortages in medical supplies like vaccines and antiviral drugs may occur. Pandemic influenza can also cause grave economic disruption as travel bans and closings of businesses and public spaces can ground the economy to a halt.<sup>4</sup> Even if businesses remain in operation, worker absentee rates can reach devastating levels because healthy workers may choose to stay home to avoid infection or care for infected relatives.

Currently, health officials are most concerned about a strand of Avian Influenza, known as H5N1, because they believe it has the potential to cause a pandemic influenza event. Although human to human spread of the H5N1 virus has only occurred on isolated occasions, H5N1 still concerns many because there is little natural immunity to it among the human population.<sup>5</sup> Furthermore, the H5N1 virus has shown resistance to existing antiviral medications. At this time, no H5N1 vaccine is available for human use.<sup>6</sup> Therefore, if the H5N1 virus were to evolve and gain the ability to spread rapidly from human to human, a pandemic influenza event could ensue.

Human H5N1 cases have been reported in parts of Asia, Africa, the Pacific, Europe, and the near east.<sup>7</sup> Although it appears that most of those infected contracted the virus through contact with birds infected with H5N1, human to human spread has been confirmed in several H5N1 clusters in which members of one family became infected. The current mortality rate for human H5N1 virus cases is around sixty percent.

### *1.2 Fitting Norwich into Larger Preparation Plans*

In preparing for a pandemic flu event, Norwich should develop measures and plans that follow the guidelines laid out by the pandemic flu plans of other larger government organizations. Specifically, Norwich should examine the Vermont Department of Health (VDH) report entitled "Pandemic Influenza Preparedness and Response Plan." The VDH plan is especially helpful because it uses the context and recommendations set down by the World Health Organization, but it customizes them to a Vermont-specific context.<sup>8</sup>

The VDH plan also lays out the authority hierarchy of officials and agencies within Vermont that would be followed in a pandemic flu event. Finally, the VDH plan contains a section of recommendations for Vermont town governments on how to best implement the plan's measures at the local level.<sup>9</sup> Therefore, any planning that Norwich undertakes in preparation for a pandemic influenza should first seek to follow the guidelines laid out by the Vermont Department of Health or other state and national agencies.

## **2. COMMUNICATION OF PANDEMIC INFORMATION TO THE PUBLIC**

Clear and strategic communication is an essential part of a comprehensive local response to any public health crisis. Ensuring the effectiveness of public communication during a health crisis will maximize resource use and could minimize the spread of the pandemic. By efficiently informing community members about the symptoms of concern and the appropriate measures to protect their health and safety, Norwich can minimize the amount of citizens that may seek unnecessary treatment from local healthcare centers, thus preventing further exposure to the pandemic and preserving limited resources needed to save lives.<sup>10</sup>

### *2.1 Disseminating a Unified Message*

To clearly and quickly communicate the most accurate and robust information about the outbreak to the public, a single uniform message should be issued from all Norwich government organizations and treatment centers. A uniform message is vital to preventing panic and confusion. A Pandemic Communications Headquarters should be established in a Norwich government building, such as the fire station or public library, to facilitate the release of information. This facility should also set up a telephone hotline in order to answer questions from Norwich residents. Healthcare workers and public health staff should be educated and trained in basic media relations and public health communication to effectively operate the Communications Headquarters during the pandemic emergency<sup>11</sup>.

Norwich communications should always coordinate with and reflect the message disseminated by the state and federal government to which they are subordinate. The local organized response should reiterate communications from the Vermont Department of Health as well as the federal Center for Disease Control (CDC) about the most up-to-date scientific information and response progress. To encourage public trust and confidence, the Norwich Commissioner of Health should be in constant contact with VDH officials and other state health and communication agencies to issue clear and consistent messages void of speculation.<sup>12</sup>

### *2.2 Methods of Communication*

Norwich should take full advantage of its local communication capabilities in disseminating information to the public. The Norwich Fire Department possesses road signs that display messages electronically. These could be placed in highly visible locations with information about the pandemic.<sup>13</sup> The town website should carry

information on the status of the influenza outbreak in Norwich as well as a listing of local health care centers where community residents can seek necessary treatments and basic resources. In addition, Norwich town officials could coordinate with Upper Valley media outlets, including *Valley News* and local radio stations so that these outlets print and broadcast information to residents about influenza and its treatment in Norwich. As a last resort, a plan for police, firefighters, and other social servicemen to go door-to-door to provide information and care to Norwich families should be put in place.

### **3. COMBATIVE MEASURES**

According to the hierarchy of authority established by the VDH “Pandemic Influenza Preparedness and Response Plan,” Norwich town officials are responsible for implementing local combative measures during a pandemic influenza event.<sup>14</sup> These measures could include establishing temporary clinics and instituting and monitoring quarantine and isolation efforts.

#### *3.1 Temporary Clinics*

Temporary clinics will serve an important role both before a pandemic influenza actually affects Norwich and after a pandemic influenza affects the town itself. While a pandemic influenza event is spreading, but has yet to affect Norwich, clinics can be used to dispense any vaccinations to the appropriate recipients, as defined by state regulations. During a period when a pandemic influenza event is actually infecting citizens within Norwich, clinics could be used to continue dispensing vaccines and to supply infected residents with antiviral medications and other medical supplies, such as face masks and disinfectant. Norwich town officials should also plan to staff these clinics with several mental health professionals who will be able to deal with the psychological trauma that tends to occur among a population during any type of large scale crisis.

When planning for a pandemic influenza, Norwich town officials should look to local doctors and nurses as well as local hospitals, such as Dartmouth Hitchcock Medical Center, for trained personnel to staff such clinics. Pandemic influenza preparation plans should also designate potential locations that these clinics could be held. Locations could include town buildings, such as the town hall or library, and private spaces if a partnership were established with local business owners.

#### *3.2 Implementing Isolation*

Isolation is the practice of mandating the removal of patients infected with influenza from healthy citizens in order to prevent the spread of the virus. In Vermont, the Commissioner of Health has the authority to institute mandatory isolation during a pandemic flu event.<sup>15</sup> It is easiest to institute practices of isolation within the confines of a hospital or other medical treatment facility where a separate ward or set of rooms can be set aside for infected patients. However, if the health care system were to become overrun, Norwich officials, under the direction of the VDH, would have to implement isolation procedures at alternative facilities in town. In choosing a structure for isolating influenza patients,

town officials must consider several factors that contribute to whether a patient could be adequately cared for in that structure. These factors include access to the internet and telephones, private quarters for individual patients, separate quarters for caregivers, accessibility to food supplies, and ability to clean and disinfect the facility.<sup>16</sup> Facilities suited to this type of task include hotels, motels, and nursing homes. Additionally, isolation of influenza patients could also be carried out in temporary structures such as trailers and tents.<sup>17</sup> Norwich officials should work with the VDH to design a plan for isolation and investigate whether such temporary structures will be made available by the state or some other agency.

To fully isolate influenza patients from healthy members of the community, access to isolation facilities must be limited and monitored by the town. Therefore, in planning for a pandemic influenza event, Norwich town officials may want to design a permit system that would only allow bearers of the permit to access isolation facilities. Different permits with different levels of access could be distributed to everyone from essential health care personal working at isolation facilities to immediate family members of isolated patients. Plans for law enforcement officers to monitor entrances and exits to these facilities must also be considered. In short, Norwich town officials must formulate plans that make sure isolation facilities effectively remove diseased patients from the community at large.

### *3.3 Implementing Quarantines*

Similar to planning for isolation practices, any pandemic influenza plan must contain procedures for implementing various levels of quarantine within the town. Quarantines isolate citizens who may have been exposed to influenza, but have yet to show any symptoms of the virus. Quarantines can range in size from isolating individual citizens to isolating entire neighborhoods and communities where all residents may have been exposed. In the state of Vermont, the Commissioner of Health has the authority to institute mandatory quarantines in the event of a pandemic influenza event.<sup>18</sup> To aid the Commissioner in instituting a quarantine on the appropriate group of citizens, town officials should develop plans that call for local health officials to constantly monitor influenza case locations within the town.

In addition to helping identify citizens in need of quarantine, Norwich town officials must plan to actually implement quarantine procedures at the local level. Quarantining citizens potentially exposed to influenza is most easily accomplished by allowing these citizens to observe quarantine procedures within their own homes.<sup>19</sup> To supervise home quarantines, town officials must develop plans that allow local health officials to inspect homes before quarantines begin to determine if homes can accommodate a quarantined individual. Factors that make a home suitable for quarantine are described in depth in the VDH pandemic influenza preparedness plan.<sup>20</sup> Town officials must also be prepared to help disseminate information to quarantined individuals in their homes on quarantine procedures and general updates of the state of the influenza pandemic. Such information exchange can be accomplished through the delivery by town officials of pamphlets to private homes. Health officials must also be prepared to go door-to-door regularly to

ensure that quarantined citizens remain symptom-free and do not need to be moved to alternative facilities for treatment.

Finally, Norwich pandemic influenza plans must contain provisions of how to manage home quarantines over entire streets and neighborhoods. Plans should describe how law enforcement officials would manage access points into quarantined areas.<sup>21</sup> A system of permitted entry, similar to the permits proposed in Section 3.2 for controlling entry into isolation facilities, could be used to manage access to quarantined areas.

#### **4. COORDINATION WITH THE PRIVATE SECTOR**

Town officials should also reach out to local business owners in order to help them prepare reactions to a pandemic influenza event. Town officials should encourage businesses to establish a standard operations procedure plan for pandemic influenza that contains a strategy for minimizing the spread of the virus in the workplace and lays out how the business will operate in pandemic conditions. Norwich should also coordinate and establish partnerships with businesses that could aid the town in its response to the pandemic.

##### *4.1 Pandemic Flu Planning and Businesses*

Norwich officials could use various communications methods to educate local businesses about the effects of a possible pandemic influenza event. Officials could invite area businesses to a meeting that focused on how best to plan for a pandemic in the private sector or send out pamphlets containing similar information to area businesses. Whatever the mechanism of communication that is utilized, town officials must stress to businesses the importance of establishing plans regarding how to best operate in a pandemic influenza scenario.

According to the Department of Homeland Security report, “Pandemic Influenza Response and Recovery Guide,” all businesses, especially those highly influential to a region’s economy or infrastructure, should formulate plans that deal with the disrupting factors of any potential natural disaster.<sup>22</sup> Such plans should explore how to operate during periods of high worker absentee rates or how to operate despite severe disruptions in supply lines, among other challenges.<sup>23</sup> These plans should also put in place measures to combat the spread of the influenza virus such as the use of masks in the workplace. Norwich town officials should make local businesses aware of this Homeland Security report and help these businesses implement its recommendations in the Norwich-specific context.

##### *4.2 Private Sector Assistance in Town Planning*

When making preparations for a potential pandemic influenza event, Norwich should partner with local businesses so that the town can have access to the resources of the private sector when formulating its response. Town officials should meet with area doctors, nurses, and other health care personnel to talk about the logistics of enlisting

their service in operating town combative measures (such as temporary clinics). They should also contact local mental health professionals to discuss strategies for responding to the massive mental health trauma that a pandemic influenza event could inflict upon the population. Additionally, town officials should coordinate with doctors and officials at Dartmouth Hitchcock Medical Center (DHMC) to determine if the hospital has formulated a regional pandemic influenza plan that could include Norwich or that the town could use as a resource.

## **5. CONCLUSION**

Planning for a potential pandemic influenza epidemic is a logical step for Norwich to take in the near future. The mortality and social disruption caused by pandemic influenza events during the twentieth century exemplified the potential impact on communities around the world. Therefore, a town plan should aim to limit the impact of a pandemic influenza event by limiting mortality, the spread of the virus, and the economic impact of the pandemic. The Vermont Department of Health Plan provides a comprehensive guide for the state to follow. Therefore, Norwich should work to implement measures recommended by VDH and by the reports of other superior governing agencies. Most of these measures fall into the three areas of communications preparation, preparation to introduce combative measures during the pandemic, and coordination with local area businesses in response efforts. Laying out these three preliminary goals is the first necessary step for town officials to take in protecting the town against a pandemic influenza event.

## **APPENDIX A. PANDEMIC INFLUENZA PREPAREDNESS REPORTS**

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The following list of reports should be utilized as resources by Norwich officials when formulating a town pandemic influenza plan. Many have been referenced throughout this report itself. This list also includes the agency that authored each report.

1. Vermont Department of Public Health: “Pandemic Influenza Preparedness and Response Plan” Available at:  
<http://healthvermont.gov/panflu/documents/0706PandemicFluPlan.pdf>
2. World Health Organization: “WHO Global Influenza Preparedness Plan; The Role of the WHO and Recommendations for National Measures Before and During a Pandemic.” Available at:  
[http://www.who.int/csr/resources/publications/influenza/GIP\\_2005\\_5Eweb.pdf](http://www.who.int/csr/resources/publications/influenza/GIP_2005_5Eweb.pdf)
3. United States Department of Homeland Security: “Pandemic Influenza, Preparedness, Response, and Recovery Guide for Critical Infrastructure and Resources” Available at:  
<http://www.pandemicflu.gov/plan/pdf/cikrpandemicinfluenzaguide.pdf>

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- <sup>12</sup> “Pandemic Influenza Preparedness and Response Plan.” Vermont Department of Health. July 2006. <http://healthvermont.gov/panflu/documents/0706PandemicFluPlan.pdf>. p. 44.
- <sup>13</sup> “Snippets from the Past.” Norwich Fire Department. <http://home.comcast.net/~norwich.vt.fire/History.html>.
- <sup>14</sup> “Pandemic Influenza Preparedness and Response Plan.” Vermont Department of Health. July 2006. <http://healthvermont.gov/panflu/documents/0706PandemicFluPlan.pdf>. p. 8.
- <sup>15</sup> “Pandemic Influenza Preparedness and Response Plan.” Vermont Department of Health. July 2006. <http://healthvermont.gov/panflu/documents/0706PandemicFluPlan.pdf>. p. 39.
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